Ethnobotany of Palas Valley, Pakistan

by

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Abstract

This study represents first comprehensive ethnobotanical survey in Palas valley, Pakistan and is also an attempt to sum up the preexisting ethnobotanical information. A total of 139 ethnobotanically important plant species are being reported from the study area belonging to a total of 72 plant families. The most important families in this regard were Rosaceae (20 species), Asteraceae (9 species), Lamiaceae and Polygonaceae (5 species each). Herbs (59 species) were found to be the most used life forms followed by trees (40 species), shrubs (36 species) and Climbers (4 species) in descending order. Most frequently utilized portions of plants include Fruit (43 species), Wood (30 species), Root (24 species), Leaves (21 species), Whole Plant (16 species), Branch (15 species), Bark (8), Seed (8 species) and Flower (5 species).

Most of the plants are utilized as medicine for humans (68 species). Only 3 species could be recorded for their use as veterinary medicine (although there may be many more). There were more than 68 plant species, which are utilized as food. The cultivated crop plants were, however, not included in the list. Fruit species included 38 plants and there were 29 plants that were important as food other than fruits. Most of these were found to be utilized as potherbs. A limited storage of the food plants was also noticed. There were
29 fuel species, 2 torchwood species, 28 fodder species and 10 timber species. Agricultural tools and handles were found to be made from 13 different species. Those employed for hedges, fencing and thatching included 7 species. Five species were used as spices, three for tea and 28 species were recorded for miscellaneous i.e., other than those mentioned above. Currently there are 10 major species that are brought to market for sale these include *Bunium persicum, Diospyros lotus, Juglans regia, Morchella esculenta, Podophyllum emodi*, *Saussurea costus*, *Valeriana sp.*, *Viola sp. Vernonia anthelmentica,* and *Ziziphus oxyphylla.*

Market plants especially *Valeriana jatamansi*, *Saussurea costus*, *Paeonia emodi* and *Podophyllum emodi* are under severe pressure due to ethnobotanical collections. High summer pastures are the focus area for collection of most of the plant species and additionally intense grazing has posed a serious threat to these areas.

Awareness program in the area about the importance of the indigenous flora, sustainable plants collection and conservation of important medicinal plants would be desirable. The local community should be actively involved in conservation practices. Rotational grazing and reducing the number of livestock will help reduce pressure on pastures. Cultivation of medicinal plants and other plants of economic importance will create new openings for the uplift of poor locals and will also reduce pressures on wild population. A long-term ethnobotanical programme that may address the issues will be a great demand in future.

Introduction

Palas valley represents Pakistan's most important remaining tract of west Himalayan Forests and represents a unique social and traditional system, built upon a seasonal resettlement (Rafiq 1996). Palas harbor a population of about 60524 individuals in a total of 10 Union Councils (UCs) and has an area of about 1300 square kilometers and elevation ranges from 700-5200 masl. The Palas forests are a source of material of day to day use like wood for construction, logging, furniture, heating, medicine and trade.

Kohistani (1994 *In*: Rafiq 1994) compiled a list of local names of 134 plant species. 91 plants were mentioned their scientific names and purpose of use for 109 plants was documented. Part used for 111 plants was also given.

Rafiq (1995) documented ethnobotanical use of 96 plant species along with notes on their altitudinal distribution,

origin and their conservation status. To describe conservation status she used categories of vulnerable, endangered, rare, common and frequent (the records adopted from her are shown with *).

Shinwari (2003[a]) documented the local use methodology of more than 150 plant species from two villages (Bar Ghabair and Shuki Sair) but only up to the local nomenclature. Introduction of fodder crops was recommended to overcome the fodder shortage in the area.

Shinwari (2003[b]) studied the enhancement of earnings of non timber forest products in Palas.

This paper is an output from first comprehensive survey through area and is an attempt to gather information regarding the ethnobotanical use of flora in Palas valley in addition to rectifying the results of previous studies.

Methodology

The available literature regarding ethnobotanical research was reviewed before the field visits started. Visits were made to the valley from September 2003 May 2004 to collect the field data. Voucher specimens were collected, their local names and usage was documented through interviews with locals. The plants were taken to Herbarium, Quaid-I-Azam University, Islamabad (ISL) for identification. Nomenclature used in this report follows Nasir and Ali (1972). Transect walks were made throughout the area to collect ethnobotanical data.

Results

Data collected regarding the ethnobotanical survey of the area is summarized in Annex 1 (records adopted from Rafiq (1995) are shown with *) and briefly discussed below.

Plant resources of Palas valley

The chorological spectrum of species show a high percentage of species with a distribution restricted to adjoining areas. A significant proportion of species are confined to the Northern mountains of Pakistan, Kashmir and east Afghanistan. Only one third of flora has wider distribution in Northern Hemisphere (Rafiq 1995, 1996).

These facts give special identity to Palas flora. A wide variety of plants are there but this report is confined only to the species common in use is by the locals.

People of the valley seem to have developed a strong relation to the native flora and there is a rich culture to utilize the flora in one way or the other, for their personal requirements. The plants are frequently utilized for fuel, fodder, timber, food, medicine, potherbs and many other ways. This paper includes 139 species belonging to 72 families that are frequently in local use. The brief details of plants, their local use and their local names are presented in Annex 1.

Food plants

The food plants may be categorized into those cultivated and wild plants. Cultivated plants include crop plants that form a substantial portion of the daily food requirement and fruit orchards. Wild food covers a fraction of food requirements and collected in their natural habitat by the locals.

The cultivated crops include maize as major crop followed by wheat (cultivated at lower elevations). Many legumes are also cultivated as intercrop with maize that not only serve as food but also add to the fertility of soil. Other species that are cultivated include squashes, cucumbers, chilies, tomatoes, potato, okra and brinjals.

The food plants in Palas valley include wild fruits, potherbs, brewages, spices, cash plants and dry fruits that supply a fraction of the food requirements of the people. Though it seems to have little economic importance, yet it forms an integral part of the local economy and culture.

The availability of wild food varies in the different seasons. In spring a lot of wild herbs are collected that serve as a food item for the people. These are not only utilized during the spring but also dried for use in later months especially in winter, when the food supply is scarce. The most frequently used wild vegetables include *Allium humile* Kunth (Palon), *Amaranthus hybridus* (Ganhar), *Bistorta amplexicaulis* (Rain), *Chenopodium album* L. (Konro), *Cichorium*

intybus L.(Shar Shareen), *Datura stramonium* L. (Soweer), *Ficus palmata* (Phagoi), *Nasturtium officinale* (Tarmeera), *Plantago sp*. (Shalet), *Portulaca oleracea,* (Pichil), *Rhammnella gilgitica* (Makotch), *Taraxacum officinale* Weber. (Kaymat gul*/Pakoir), *Trillidium govanianum* (Trepath), *Urtica dioica* (Joim) and *Viola sp.* (Lilyo). Most of these vegetables are collected in spring or summer and preserved by drying and kept for further use in winter. In spring the forest bottom flourishes with the costly 'Guchi' (*Morchella esculenta*) that is a very delicious food and mostly collected for marketing.

The wild fruits of include *Ficus palmata*, *Rubus sp.*, *Celtis caucasica* (Tagha), *Olea cuspidata* (Kao), *Juglans regia* (Atchoy), and *Ziziphus oxyphylla* (Sezen), *Crataegus songarica*, (Shenthal), *Cotoneaster bacillaris*,.(Loni), *Pyrus pashia*.(Tangore), *Berberis brandisiana* (Shugloo), *Corylus jacquemontii* (Urni), *Diospyros lotus* (Umlok), *Elaeagnus parviflora* (Ghowein), *Fragaria indica* (Kikoloh Mukbursa), *Fragaria nubicola*.(Mukbursa), *Rhammnella gilgitica* (Makotch) *Ribes sp.* (Hargul), *Rubus niveus,* (Zekeeny), *Podophyllum emodi,* (Shingoy) and *Morus sp.*(Marrotch), *Punica granatum,* (Danon), *Taxus wallichiana* (Chodan), *Viburnum cotinifolium* (Aoon), *Vitis jacquemontii* (Magrath) provide subsistence food, spices and a source of precious vitamins to the local communities, especially coming to the forest for resource collection or livestock herding. The cultivated species include *Malus pumila* (Palow), *Prunus armeniaca* (Jarowait), *Prunus domestica* (Alocha) and *Prunus persica* (Arh). Many of these products e.g. morels, fruits of walnuts, jujube are collected and sold in the local market, thus providing income to the poor community.

Herbal Medicine

Medicinal plants continue to be extensively used as a major source of drugs for the treatment of many health disorders all over the world. About 400-600 medicinal plant species out of a total of 5700 are estimated to exist in Pakistan. It is estimated that up to early 1970, 84% of Pakistani population was dependent on traditional medicines while an estimated 80% of the rural population of Pakistan still depends on traditional medicines for their primary healthcare needs. According to an estimate 90% of the country's medicinal herbs are imported (Atta-ur-Rahman and Choudhary, 2000).

In recent years there has been consistent growth in the demand for plant-based drugs and products from a variety of species. This has given rise to large-scale collection and habitat degradation. It has resulted in scarcity of a number of valuable medicinal plant species, and their wide range of chemical and genetic diversity will diminish if extraction from natural habitats continues at the present rate.

Palas is rich in medicinal plants. There has been a considerable trend in use of plants as a source of medicine in near past but it is going to decline now. The preliminary reason for decline in use of herbal medicine is introduction of allopathic medicines. Traditional medicine, however, has not lost its importance totally. Most frequently utilized medicinal plants include: *Saussurea costus* (Minyal), *Valeriana sp.* (Mushkbala), *Angelica glauca* (Chur), *Ajuga bracteosa* (Buti), *Rheum webbianum* (Chotyal) and *Skimmia anquetilia* (Namer). It is believed that smoke from leaves of *Skimmia* repels evil spirits.

Medicinal plants form a valuable source of income for the local people. The principal species that are collected commercially are *Valeriana, Podophyllum, Saussurea costus* (Minyal), and *Viola* (Lilio).

Construction Material

The people live a semi-nomadic life style and their houses vary according to the prevailing conditions and duration of stay. For example the houses in the villages are mostly made of mud and stones wall having bunkers inside. In high mountain meadows the houses are totally made of wood logs. A transitional stage includes the stone walls along with wooden frames incorporated in between. In general a house consumes a lot of timber wood. The order of preferences for using a certain timber varies as a function of availability/accessibility of wood.

Settlements at summer pastures almost exclusively made of yew. *Cedrus deodara* forms the major timber at lower locations along with Blue pine. For smaller cross beams, *Parrotiopsis*, *Olea, Juglans, Quercus* and others are used. As thatching material the bushes like *Plectranthus rugosus, Indigofera sp.*, *Sophora sp.,* and ferns in the descending order of preference locally.

Fuel Wood

Fuel wood is one of the most important basic needs in the area. Trend in using any other kind of fuel like dung cakes was not found in the area. Although, the collectors prefer deadwood but cut alive branches or small trees if deadwood is scarce. It is exclusively fulfilled from the forests. The most preferred wood in the area is oak followed by *Olea*, Yew, willow, mulberries and walnuts etc. Besides these each and every plant which is otherwise useless is generally exposed to burning as fuel wood.

Cash plants

'Guchis' (*Morchella esculenta*) are generally collected by locals from the forest, and sold in the market with handsome earning. Similarly the walnuts are also sold in the market for better reward. Other species that are brought to market include some medicinal plants. Amlok (*Diospyros lotus*) and Sezen (*Ziziphus oxyphylla*) are also taken to the market for sale. Kal Ziri (*Vernonia anthelmentica*) and Hayon (*Bunium persicum*) are commonly brought spices for selling.

Agricultural tools and handles:

Most of the parts of plough other than yokes are made of oaks. *Celtis* (chukibaeoon) wood is preferred for making yokes. For sticks and handles etc., *Parrotiopsis* ('Pashot') and *Cotoneaster* ('Loni') are generally preferred.

Fodder species

Since the people of Palas are transhumant pastoralists, livestock keeping is the major economic resource forming an integral part of the traditional tribal community. It not only provides food in the form of animal fat, milk, and its products but also a source of cash income for the local people. A large number of plant species are used as feed by the domestic like sheep, goats, cattle, and donkeys. Free grazing is practiced to a great extent in the area. People collect fodder in both arboresent and herbaceous forms during winter. The fodder includes both cultivated and wild species. Principally the fodder is collected for use in winter months. Grasses form the major source of collected fodder and are harvested from the margins of agricultural fields and wasteland and from forests at steeper slopes during fall.

The fodder grasses together with maize and wheat stalks, gathered after the grain has been harvested, are stored and used during the winter. Fodder is stored for winter in piles known as 'Tope', which consist of two bundles of grass, tied together at one end and impended over a branch of tree. The grass species that are stored as fodder, although not shown in annex 1, include *Apluda mutica, Aristida adscenscionis, Bromus pectinatus, Chrysopogon gryllus, Cymbopogon jawarancusa, Dichanthium annulatum, Digitaria sp., Festuca sp., Heteropogon contortus, Imperata cylindrica, Poa sp., Setaria sp.,* and *Themeda anathera.*

Plants with Miscellaneous Use

The plants that were classified in this category included the plants used for cleaning of utensils (like *Senecio chrysanthemoides*), green pesticides (like *Aconogonum alpinum*), etc. The leaves of *Juniperus macropoda* (Chilley) are boiled in water and this water is used to treat milk pots with a view that the production of butter increases this way. The fruit of *Cucurbita moschata* (Shan ko Tok) is dried and used to make pots for milk and water, similarly *Acer sp.* (Chain) wood is used to make utensils for everyday use. These activities should be encouraged and properly managed by the local people for better use of resources for benefit of the local people and protection of ethnobotanical culture. This could turn into a useful cottage industry in the area.

Discussion

The mountain environment has emerged as one of the most significant challenges to human understanding and organizational ability in 20th century. Over the last several hundred years, and in particular in the current century, the human impact on mountain environment has increased considerably. These interventions have both stabilizing and disturbing effects on the mountain environments.

In any mountain subsistence-agricultural system, the demands on the forest are numerous and fairly self evident: fuelwood, undoubtedly, and construction timber, house shingles, timber for house and farm utensils, and, of no less importance to the villages, fodder, thatch, and animal bedding. To these must be added medicinal herbs, nuts, fruits, mushrooms, and other secondary products.

According to Bandyopadhyay (1993) population growth in the 20 century has lead to a *"downward spiral of*

environmental degradation under the condition of a high population density in the Himalayan region". In case of Palas, livestock grazing is the main problem. There is a geometric increase in livestock with an arithmetic increase in population. Khan (2002) reported that livestock population in the range area was 817.55 livestock units (LU) against the required stocking density of 82.5 LU at rangeland that represents a high grazing pressure. The most prone areas to such disturbance are the sub-alpine and alpine zones, which are main supply of ethnobotanically important flora. Here the livestock density increases due to localized shift of animals from lower areas during summers (Fig. 1). As soon as snow melts these areas are occupied by man and his animals and remain under constant grazing pressures till fall. There is already a decline in the extent and quality of high elevation pastures and consequent habitat/species loss resulting in decline of many species and changed species dynamics in plant communities of this zone. Livestock population levels need to be reduced or some system of rotational grazing has to be introduced.

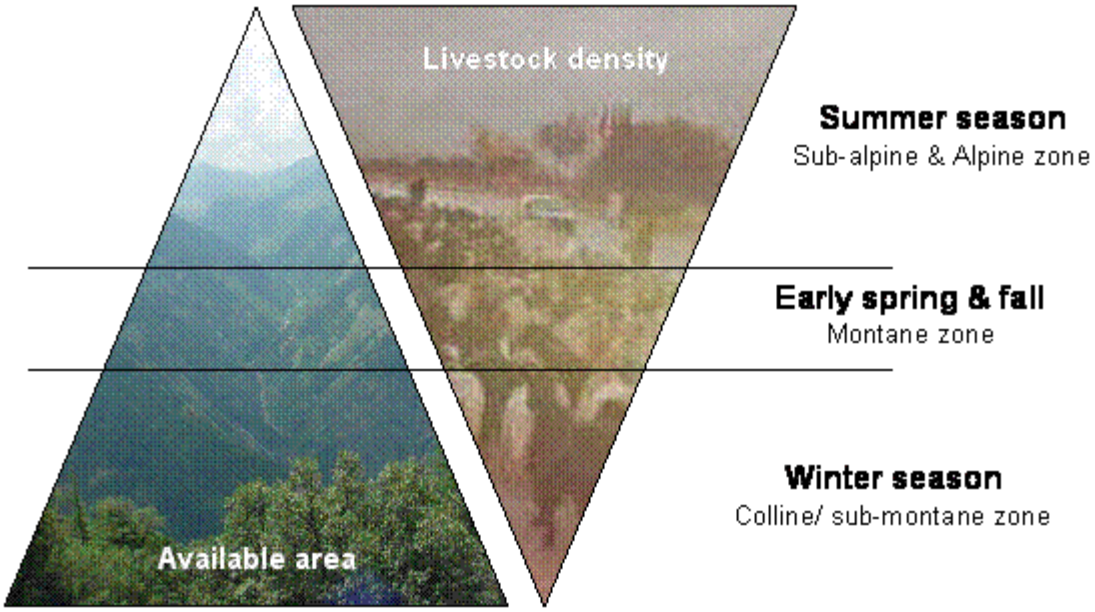

Fig. 1: Livestock density in various seasons during transhumance

Non sustainable collections of few medicinal plants pose a great threat to the flora of Palas. These plants include *Valeriana jatamansi* ('Mushkbala'), *Saussurea costus* ('Manial'), *Paeonia emodi* ('Mamekh') and *Podophyllum emodi* ('Shinrgo'). These plants may face a local extinction in future if constantly being exploited at such rates.

There are some plants, which are not over harvested but have market value. These include:
Acorus calamus, Adiantum venustum, Ajuga bracteosa, Artemisia vulgaris, Berberis, Bergenia ciliata, Bistorta amplexicaulis, Caltha alba, Cichorium intybus, Colchicum luteum, Bunium persicum, Dioscorea deltoidea, Diospyros lotus, Ephedra intermedia, Geranium wallichianum, Hedera nepalensis, Hyoscyamus niger, Hypericum perforatum, Origanum vulgare, Rheum and *Thymus linearis.* These plants could provide an alternative/ additional income for the local people. Surveys and analyses of the degree and extent of the subsistence etc for these plants should be conducted prior to encouraging more intensive commercial exploitation. The cultivation of such 'commercial' plants would definitely create new opportunities for locals and could help reduce the pressure on wild population. Marketing analyses should be performed and better linkages should be developed among the locals and networks already dealing with these products.

An awareness program in the area about the importance of the indigenous flora, sustainable plants collection and conservation of important medicinal plants would be desirable. The local community should be involved in conservation practices.

Too little is documented about many areas that may affect ecosystem management strategy in the study area, like - population fluctuations, coexistence, carrying capacity, interspecific interactions or harvest rates of ethnobotanical

species. These issues must be addressed in addition to case studies of future for better management and integrity of Palas ecosystem that is a great asset.

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Annex 1

Botanical Name: *Abies pindrow* Royle
Family: Pinaceae
Local Name: Rein
Habit: Tree
Part Used: Trunk, Branches
Folk use: The plant is used as timber, beams for bridges and roofs and fuel wood in the area. The trunks are also used to make water storage tanks and as channel for water flow.

Botanical Name: *Acacia modesta* Wall.
Family: Mimosaceae
Local Name: Palos
Habit: Tree
Part Used: Leaves, Gums
Folk Use: Leaves are used as fodder. Gum is stimulant and given as cooked meal with ‘Desi ghee’, Poppy seeds and almonds to women after

child birth.

Botanical Name: *Acer caesium* Wall
Family: Aceraceae
Local Name: Chain
Habit: Small Tree
Part Used: Wood
Folk use: The plant is used as fuel wood and making utensils.

Botanical Name: *Acer cappadocicum* Gled.
Family: Aceraceae
Local Name: Chin
Habit: Small Tree
Part Used: Wood
Folk use: The plant is used as fuel wood and making utensils.

Botanical Name: *Achillea millefolium* L.
Family: Asteraceae
Local Name: Raon
Habit: Herb
Part Used: Whole plant
Folk Use: Used in treatment of wounds

Botanical Name: *Aconitum laeve* Royle
Family: Ranunculaceae
Local Name: Maniree
Habit: Herb
Part Used: Root
Folk Use: Medicine*

Botanical Name: *Aconogonum alpina* (All.) Schur
Family: Polygonaceae
Local Name: Pul-pulak
Habit: Herb
Part Used: Leaf
Folk Use: Used as fish poison.

Botanical Name: *Adiantum venustum* D. Don
Family: Adaintaceae
Local Name: Sumbul
Habit: Herb
Part Used: Leaf
Folk Use: Medicine*

Botanical Name: *Aesculus indica* (Wall. ex. Cambl.) Hk.f.
Family: Hippocastinaceae
Local Name: Ashanr
Habit: Tree
Part Used: Wood, Leaves and Fruit
Folk Use: Wood is used as timber, furniture, agricultural tools and house hold utensils. Leaves are used as fodder while fruits serve for treating colic in horses and for stamina in cattle.

Botanical Name: *Ailanthus altissima* (Mill) Swingle
Family: Simarubaceae
Local Name: Lagan
Habit: Tree
Part Used: Wood, Leaves, Gum resin
Folk Use: Wood is used as a fuel. Leaves although not preferred by livestock, used as fodder. Gum resin is mixed with milk to treat dysentery.

Botanical Name: *Ajuga bracteosa* Wall. Ex. Benth
Family: Lmiaceae
Local Name: Buti
Habit: Herb
Part Used: Leaves
Folk Use: Used to purify blood

Botanical Name: *Ajuga. parviflora* Beth
Family: Lamiaceae
Local Name: Buti
Folk Use: Used to purify blood

Botanical Name: *Allium humile* Kunth
Family: Alliaceae
Local Name: Palon
Habit: Herb
Part Used: Leaf
Folk Use: Food

Botanical Name: *Amaranthus hybridus* L.
Family: Amaranthaceae
Local Name: Ganhar
Habit: Herb
Part Used: Leaf, seeds
Folk Use: Both seeds and leaves are cooked as food. Seeds are also used to make bread.

Botanical Name: *Angelica glauca* Edgew
Family: Apiaceae
Local Name: Chur
Habit: Herb
Part Used: Root
Folk Use: Used in treatment of diarrhea. Sometimes added in snuff to make it stronger. Also used to attract honeybees*

Botanical Name: *Arnebia benthami* (Wall. ex. G.Don.) I.M. Johnston
Family: Boraginaceae
Local Name: Ratrati
Habit: Herb
Part Used: Root
Folk Use: Medicine, dye*

Botanical Name: *Artemisia brevifolia* Wall. ex. DC
Family: Asteraceae

Local Name: Azhanr
Habit:
Part Used:
Folk Use:

Botanical Name: *Artemisia scoparia* L.
Family: Asteraceae
Local Name: Jao
Habit: Herb
Part Used: Plant
Folk Use: Used as medicine against malarial fever. Also used to make brooms.

Botanical Name: *Astragalus subumbellatus* Kl.
Family: Paplionaceae
Local Name: Mazkoro
Habit: Shrub
Part Used: Branches, root*
Folk Use: Branches are used as a toothbrush ('miswak'). Roots are used for medicinal purposes*. The extract of roots is taken to purify blood.

Botanical Name: *Berberis brandisiana* Ahrendt
Family: Berberidaceae
Local Name: Shugloo
Habit: Shrub
Part Used: Leaves, Fruits, Bark
Folk Use: Leaves decoction is useful in dysentery and sore throat. Fruits are edible. Root and stem bark is tonic and is frequently utilized for healing of wounds and arthritis.

Botanical Name: *Bergenia ciliata* (Haw) Sternb.
Family: Saxifragaceae
Local Name: Koarat
Habit: Herb
Part Used: Root
Folk Use: Root is powdered and utilized as medicine. This plant is extracted at commercial scale.

Botanical Name: *Betula utilis* D. Don
Family: Betulaceae
Local Name: Yojh
Habit: Tree
Part Used: whole plant
Folk use: Wood is used for making agricultural tools and also valued as a timber wood. Branches are used as fuel. Bark can be removed as a paper that is used to pack butter and 'ghee'. Leaves are utilized as fodder.

Botanical Name: *Bistorta amplexicaulis* (D. Don) Green
Family: Polygonaceae
Local Name: Rain
Habit: Herb
Part Used: Leaf, root*

Folk Use: Leaves are used as a vegetable. Root is medicinal*.

Botanical Name: *Bunium persicum* (Boiss.) B. Fedt.
Family: Apiaceae
Local Name: Hayon
Habit: Herb
Part Used: Fruit
Folk Use: Used as spice and a remedy for colic.

Botanical Name: *Caltha alba* Jacq. ex. Camb
Family: Ranunculaceae
Local Name: Thoktokoe*, Makhanpat
Habit: Herb
Part Used: Leaf
Folk Use: Medicine*

Botanical Name: *Cannabis sativa* L.
Family: Canabinaceae
Local Name: Bhang
Habit: Shrub
Part Used: Leaves, Flowering tops, whole plant, Seeds
Folk Use: Paste made from fresh leaves is used to kill lice. Flowering tops are sedative, anodyne and narcotic. Sometimes relished by the horses and mules. Given to equine in case of stomachache.

Botanical Name: *Cardamine macrophylla* Willd.
Family: Apiaceae
Local Name: Kaur
Habit: Herb
Part Used: Herb
Folk Use: Vegetable*.

Botanical Name: *Cedrus deodara* (Roxb. ex. Lamb.) G. Don
Family: Pinaceae
Local Name: Faloojh
Habit: Tree
Part Used: Wood, gum/resin
Folk Use: This is a very valuable timber species in the area and majority of houses have utilized this wood as construction material. The gum/resin is chewed by youngsters as a ‘chewing gum’. Torchwood obtained from this tree is called ‘chowb’: as compared to ‘lahee’ of *Pinus wallichiana* this torchwood produces less smoke but extinguishes earlier than ‘lahee’.

Botanical Name: *Celtis caucasica* Willd.
Family: Ulmaceae
Local Name: Chukki beoon
Habit: Tree
Part Used: Wood, Leaves, Fruits
Folk Use: wood is used for making agricultural tools and for fuel purposes. Leaves are used as fodder while fruit is used in colic and allergy.

Botanical Name: *Chenopodium album* L.
Family: Chenopodiaceae
Local Name: Konro
Habit: Herb
Part Used: Leaf
Folk Use: Principally utilized as food plant also used as fodder.

Botanical Name: *Cichorium intybus* L.
Family: Astraceae
Local Name: Shar Shareen
Habit: Herb
Part Used: Young shoots
Folk Use: Cooked as food.

Botanical Name: *Cirsium falconeri* (Hk.f.) Petrak
Family: Asteraceae
Local Name: Jowch
Habit: Tall herb
Part Used: Root
Folk Use: Food

Botanical Name: *Corydalis govaniana* Wall. ex. Tent.
Family: Papveraceae
Local Name: Mamere
Habit: Herb
Part Used: Root
Folk Use: Used in case of ophthalmic diseases

Botanical Name: *Corylus jacquemontii* Decne.
Family: Corylaceae
Local Name: Urni
Habit: Tree
Part Used: Fruit, seed*
Folk Use: Fruits are edible. Seeds are used as medicine*

Botanical Name: *Cotoneaster bacillaris* Wall. ex Lindl.
Family: Rosaceae
Local Name: Loni
Habit: Shrub
Part Used: Fruit
Folk Use: fruit is edible.

Botanical Name: *Cotoneaster nummularia* Fish & Mey.
Family: Rosaceae
Local Name: Loni
Habit: Shrub
Part Used: Whole plant
Folk Use: Stem and branches are used for making walking sticks, agricultural tools and for fencing.

Botanical Name: *Crataegus songarica* C. Koch.
Family: Rosaceae
Local Name: Sheteel

Habit: Tree
Part Used: Whole plant, Fruits
Folk Use: Leaves used as fodder, wood for fuel requirements. Fruits are edible.

Botanical Name: *Cuscuta reflexa* Roxb.
Family: Cuscutaceae
Local Name: Ooloe
Habit: Parasitic climber
Part Used: whole plant
Folk Use: Used as anti-lice and for treating sores.

Botanical Name: *Dalbergia sissoo* Roxb.
Family: Papilionaceae
Local Name: Tali
Habit: Tree
Part Used: Wood, leaves
Folk Use: Used as fuel wood

Botanical Name: *Daphne oleoides* Schreb.
Family: Thymelaeaceae
Local Name: Kutilal
Habit: Shrub
Part Used: wood, Fruits
Folk Use: Fuel wood. Fruit is edible.

Botanical Name: *Datisca cannabina* L.
Family: Datiscaceae
Local Name: Kalbeer
Habit: Herb
Part Used: Leaves
Folk Use: Leaves are used to cure toothache and gum diseases.

Botanical Name: *Datura stramonium* L.
Family: Solanaceae
Local Name: Soweer
Habit: Shrub
Part Used: Young leaves, seeds
Folk Use: Seeds are used against urinary complaints.

Botanical Name: *Debregeasia salicifolia* (D. Don) Rendle.
Family: Urticaceae
Local Name: Chewr
Habit: A water course shrub
Part Used: Branches
Folk Use: It is used as fuel wood. Branches are used as material for fencing and thatching.

Botanical Name: *Desmodium elegans* D.C.
Family: Papilionaceae
Local Name: Shay-muth
Habit: Shrub
Part Used: Leaves, Branches

Folk Use: Leaves serve as fodder for goats while branches are used as fuel purpose.

Botanical Name: *Dioscorea deltoidea* Wall. ex Griseb.
Family: Dioscoraceae
Local Name: Chalyon
Habit: Climber
Part Used: Root
Folk Use: Medicinal. The fruit is used by young children as toy.

Botanical Name: *Diospyros lotus* L.
Family: Ebenaceae
Local Name: Umlok
Habit: Tree
Part Used: Fruit, wood, leaves
Local Uses: The wood is used as fuel. Fruits are edible which are carminative, and causes flatulence. Leaves are used as fodder.

Botanical Name: *Dodonaea viscosa* (L.) Jacq.
Family: Sapindaceae
Local Name: Schownt
Habit: A shrubby plant of exposed dry habitat.
Part Used: Leaves, seeds, wood
Local Uses: It is used in swelling, burns, thatching and fencing. Shoots are used to make brooms.

Botanical Name: *Elaeagnus parvifolia* Wall.
Family: Elagnaceae
Local Name: Ghowein
Habit: Shrub
Part Used: Wood, Fruits
Local Uses: Fuel wood. Fruits are edible.

Botanical Name: *Ephedra gerardiana var. gerardiana* Wall. ex Stapf
Family: Ephedraceae
Local Name: Soon
Habit: Shrub
Part Used: Shrub
Local Uses: Given to goats in case of cough. Ash is used in making snuff.

Botanical Name: *Euphorbia wallichii* Hk. f.
Family: Euphorbiaceae
Local Name: Titree
Habit: Herb
Part Used: Root*
Folk Use: Roots are used as medicine*

Botanical Name: *Ficus palmata* Forssk.
Family: Moraceae
Local Name: Phagoi
Habit: Tree
Part Used: Wood, Leaves, Fruit, Latex

Folk Use: Fruits are edible and laxative. Young fruits and leaves are also cooked as food. Wood is used as fuel and leaves as fodder.

Botanical Name: *Filipendula vestita* (Wall. ex. G. Don.) Maxim.
Family: Rosaceae
Local Name: Shwansh
Habit: Herb
Part Used:
Folk Use: Medicine*

Botanical Name: *Fragaria indica* Andr.
Family: Rosaceae
Local Name: Kikoloh Mukbursa
Habit: Herb
Part Used: Fruit
Folk Use: Food

Botanical Name: *Fragaria nubicola* Lindl. ex. Lacaita.
Family: Rosaceae
Local Name: Mukbursa
Habit: Herb
Part Used: Fruit
Folk Use: Food

Botanical Name: *Fraxinus xanthoxyloides* (Wall. ex G. Don) DC.
Family: Oleaceae
Local Name: Kasudar
Habit: Tree
Part Used: Leaves and branches
Folk Use: Leaves are used as fodder. Also utilized as fuel. Leaves are also reported to be medicinal*.

Botanical Name: *Galium aparine* L.
Family: Rubiaceae
Local Name: Loh
Habit: Herb
Part Used: Whole plant
Folk Use: Herb cooked in ‘desi ghee’(milk fat) and used to heal local injuries

Botanical Name: *Geranium wallichianum* D. Don ex Sweet
Family: Geraniaceae
Local Name: Ratan jok
Habit: Herb
Part Used: Root
Folk Use: Medicine

Botanical Name: *Geum elatum* Wall.
Family: Rosaceae
Local Name: Toktoko
Habit: Herb
Part Used: Leaf
Folk Use: Medicinal*

Botanical Name: *Gymnosporia royleana* Wall. Lawson.
Family: Celastraceae
Local Name: Phaykar
Habit: Shrub
Part Used: Whole plant
Folk Use: Used as fodder fuel wood.

Botanical Name: *Hedera nepalensis* K. Koch
Family: Araliaceae
Local Name: Harbumbar
Habit: Climber
Part Used: Leaves, fruit
Folk Use: Leaves are used as fodder and fruit is medicinal.

Botanical Name: *Hypericum perforatum* L.
Family: Guttiferaceae
Local Name: Shawnsh
Habit: Herb
Part Used: Leaves
Folk Use: Beverage

Botanical Name: *Impatiens glandulifera* Royle
Family: Balsaminaceae
Local Name: Koindaru*/Kandroi/Bhantil
Habit: Herb
Part Used: Seeds
Folk Use: Food*.

Botanical Name: *Indigofera heterantha* Wall. ex. Brand.
Family: Papilionaceae
Local Name: Kasti
Habit: A medium sized shrub
Part Used: Shoots, branches
Local Uses: Shoots serve as fodder for goats (not preferred). Young branches are twisted into ropes ('greel'), also used to make brooms and as fencing, thatching and roofing material. Ash is used for making snuff. Roots have been reported to have medicinal properties*.

Botanical Name: *Jasminum humile* L.
Family: Oleaceae
Local Name: Tubkoi
Habit: Climbing shrub
Part Used: Root
Local Uses: Root decoction is used for curing ringworms.

Botanical Name: *Jasminum leptophyllum* Rubina Rafiq
Family: Oleaceae
Local Name: Nik
Habit: Shrub
Part Used: Leaves, Branches
Local Uses: Used as fumigant against fleas*. Also used against lice in cattle. In old times the leaves were crushed, added to water and this water was poured over rocks heated by fire to break them, as there was no

dynamite available at that time.

Botanical Name: *Juglans regia* L.
Family: Juglandaceae
Local Name: Khakhaye*/ Atchoy/ Akhrot
Habit: Wild/cultivated deciduous tree
Part Used: Nuts, bark, leaves, and wood
Local Uses: Root bark (Dandasa) is used for cleaning and sparkling teeth. Leaves are also used to color lips. Nuts edible. Decoction of leaves is given in case of itch.

Botanical Name: *Jurinea dolomiaea* Boiss.
Family: Asteraceae
Local Name: Chukni
Habit: Herb
Part Used: Root
Folk Use: Medicine, 'chewing gum'*

Botanical Name: *Malus pumila* Mill.
Family: Rosaceae
Local Name: Palow
Habit: A cultivated fruit tree with many varieties
Part Used: Fruit, flowers, leaves, wood
Folk Use: Valuable commercial fruit. Wood is hard and sometimes used for agricultural tools, branches serves as fuel wood and leaves as fodder.

Botanical Name: *Malva sylvestris* L.
Family: Malvaceae
Local Name: Shanee
Habit: Herb
Part Used: Leaves
Folk Use: Cooked as food, often cultivated.

Botanical Name: *Melia azedarach* L.
Family: Meliaceae
Local Name: Lagan
Habit: Tree
Part Used: Wood, Leaves, Fruit
Folk Use: Used as timber wood. Leaves are used as fodder. Fruits grind and fed to the goats as carminative. Leaves grind and used to cure fever and as purifier.

Botanical Name: *Mentha royleana* Benth.
Family: Lamiaceae
Local Name: Phebil
Habit: Herb
Part Used: Plant
Folk Use: Dried leaves are crushed, mixed with table salt and used for abdominal pain.

Botanical Name: *Morchella esculenta* (L.) Pers ex. Fr
Family: Halveliaceae

Local Name: Guchi
Habit: Fungi
Part Used: Plant
Folk Use: An important market item. Used as food.

Botanical Name: *Morus alba* L.
Family: Moraceae
Local Name: Marrotch
Habit: A cultivated or wild deciduous tree
Part Used: Fruits, leaves, branches, trunk
Folk Use: Fruits are eaten both fresh and dry. Baskets are made from branches. Leaves used as fodder.

Botanical Name: *Morus nigra* L.
Family: Moraceae
Local Name: Marrotch
Habit: A cultivated or wild deciduous tree
Part Used: Leaves, fruits, branches, wood
Folk Use: Fruits are eaten both fresh and dry. Baskets are made from branches. Leaves used as fodder.

Botanical Name: *Myrsine africana* L.
Family: Myrsinaceae
Local Name:
Habit: A medium sized shrub
Part Used: Leaves, fruits
Folk Use:

Botanical Name: *Myrtis communis* L.
Family: Myrtaceae
Local Name: Aoob/Manoo
Habit: Shrub
Part Used: Leaves
Folk Use: Used as fragrance in tea.

Botanical Name: *Nasturtium officinale* R.Br.
Family: Brassicaceae
Local Name: Tarmeera.
Habit: Water course herb
Part Used: Whole plant
Folk Use: Used as potherb.

Botanical Name: *Nerium indicum* Mill.
Family: Apocyanaceae
Local Name: Phudr
Habit: Shrub
Part Used: Leaves, branches
Folk Use: Used as fumigant against fleas. Branches used as thatching material and sometimes as toothbrush (‘miswak’)

Botanical Name: *Olea ferruginea* Royle
Family: Oleaceae
Local Name: Kao

Habit: Medium sized tree
Part Used: Wood, Leaves, Bark
Folk Use: Wood is used for making sticks, agricultural tools, firewood and as timber. Leaves used as fodder. Leaves decoction is used for toothache and bark is used to cure fever. Young branches used to make ropes ('Greel').

Botanical Name: *Oxalis corniculata* L.
Family: Oxalidaceae
Local Name: Chukee
Habit: Herb
Part Used: Leaves
Folk Use: Used as flavoring agent.

Botanical Name: *Paeonia emodi* Wall. ex. Hk. f.
Family: Paeoniaceae
Local Name: Mamekh
Habit: Herb
Part Used: Root
Folk Use: Given to livestock in case of fever. Also served to bulls as tonic.

Botanical Name: *Parrotiopsis jacquemontiana* (Decne.) Rehder
Family: Hamamelidaceae
Local Name: Pashot
Habit: Small tree
Part Used: Wood, Leaves, Branches
Folk Use: Wood is used for making agricultural tools and sticks. Leaves are utilized as fodder while branches serve as fuel wood

Botanical Name: *Pedicularis sp.*
Family: Scrophulariaceae
Local Name: Malphatoi*
Habit: Herb
Part Used:
Folk Use:

Botanical Name: *Picea smithiana* (Wall.) Boiss.
Family: Pinaceae
Local Name: Katcral
Habit: Tall tree
Part Used: Whole tree.
Folk Use: Timber wood used in bridges, building houses, fuelwood.

Botanical Name: *Pinus wallichiana* A. B. Jackson
Family: Pinaceae
Local Name: Choee
Habit: Tall tree of
Part Used: Whole tree
folk Use: Valuable timber wood, used for house building, making furniture, making bridges. Also used as torchwood called 'lahee'.

Botanical Name: *Pistacia chinensis subsp. integerrima* Bunge
Family: Anacardiaceae

Local Name: Kakoh
Habit: Medium sized tree
Part Used: Wood, Leaves, Bark
Folk Use: Wood used as fuel. Leaves serve as fodder for cattle .Tonic, antiseptic. Bark is used for curing wounds.

Botanical Name: *Plantago lanceolata* L.
Family: Plantaginaceae
Local Name: Shalet
Habit: Herb
Part Used: Leaves
Folk Use: Used as potherb

Botanical Name: *Plantago major* L.
Family: Plantaginaceae
Local Name: Shalet
Habit: Herb
Part Used: Leaves
Folk Use: Used as potherb

Botanical Name: *Plectranthus rugosus* Wall ex. Bth
Family: Lamiaceae
Local Name: Salzal
Habit: Shrub
Part Used: Leaves
Folk Use: Given to cattle to increase milk yield and also used to repel fleas.

Botanical Name: *Podophyllum emodi* Wall.
Family: Podophyllaceae
Local Name: Shingoy
Habit: Herb
Part Used: Fruit, Root
Folk Use: Fruit is edible. Root is used in medicines, so this plant is collected at commercial basis.

Botanical Name: *Polygonum paronychioides* C.A. Mey. ex. Hohen.
Family: Polygonaceae
Local Name: Bankay
Habit: Herb
Part Used: Herb
Folk Use: Medicinal

Botanical Name: a. *Populus caspica* Bornm.
b. *Populus ciliata* Wall.
Family: Salicaceae
Local Name: Turuk
Habit: Tall cultivated tree especially on roadsides
Part Used: Leaves, wood
Folk Use: Used as fuel wood, ornamental, shade tree, used for making shelters for tobacco drying. Leaves serve as fodder for goats and sheep.

Botanical Name: *Portulaca oleracea* L.

Family: Portulacaceae
Local Name: Pichil
Habit: Herb
Part Used: Plant
Folk Use: Used as potherb

Botanical Name: *Prunus armeniaca* L.
Family: Rosaceae
Local Name: Jaroait
Habit: A cultivated fruit tree
Part Used: Fruits, wood, leaves, seeds
Folk Use: Fruits and seeds are eaten both fresh and dry. Leaves serve as fresh fodder.

Botanical Name: *Prunus cornuta* (Wall. ex. Royle) Steud.
Family: Rosaceae
Local Name: Bhareet
Habit: A medium sized tree.
Part Used: Fruit, wood, leaves
Folk Use: firewood, fodder and medicine.

Botanical Name: *Prunus domestica* L.
Family: Rosaceae
Local Name: Alucha
Habit: A medium sized cultivated fruit tree with many varieties
Part Used: Fruit, wood, leaves
Folk Use: Fruit pulp is used in chutneys. Wood is used for burning. Leaves are used as fresh fodder.

Botanical Name: *Prunus persica* (L.) Batsch.
Family: Rosaceae
Local Name: Shaftalu
Habit: A small sized wild/cultivated fruit tree with many varieties
Part Used: Fruit, leaves and wood
Folk Use: Fruits edible, fuel wood, leaves serve as fodder.

Botanical Name: *Pteridium aquilinum* (L) Kuhn.
Family: Pteridaceae
Local Name: Hatoye
Habit: Herb
Part Used: Fronds
Folk Use: Fronds cooked as food. Also used as thatching material.

Botanical Name: *Punica granatum* L.
Family: Punicaceae
Local Name: Danon
Habit: A wild/cultivated fruit yielding small bush like tree
Part Used: Fruit, bark, leaves
Folk Use: fruit is edible. Leaves and fruit pericarp used in dysentery, whooping cough, it is laxative. Seeds are dried and condiments and used as spices. Bark of stem used to cure fever.

Botanical Name: *Pyrus communis* L.

Family: Rosaceae
Local Name: Nashpati
Habit: Cultivated tree with many varieties
Part Used: Fruits, wood
Folk Use: Fruits are edible and have a commercial value. Wood is used for burning purposes.

Botanical Name: *Pyrus pashia* Ham ex. D.Don.
Family: Rosaceae
Local Name: Tangore
Habit: A wild fruit tree
Part Used: Fruits, wood
Folk Use: Fruits are edible also used as Fuel wood.

Botanical Name: *Quercus baloot* Griffith
Family: Fagaceae
Local Name: Bani
Habit: A slow growing tree
Part Used: Wood
Folk Use: Timber, fuel wood, Wood is also used for making agricultural tools specially ploughs and handles. Fruit is called ‘geroli’ that is roasted over fire and used as dry fruit.

Botanical Name: *Quercus floribunda* Lindl. ex A. Camus
Family: Fagaceae
Local Name: Jareend
Habit: A slow growing tree
Part Used: Wood and nuts
Folk Use: Fuel wood species. Seeds are edible used in diarrhea, indigestion and asthma. Children play marbles with seeds. Wood is used in agricultural tools, handles of plough, axes, gun buts, and walking sticks.

Botanical Name: *Rhammnella gilgitica* Mansf. & Melch.
Family: Rhamnaceae
Local Name: Makotch
Habit: Shrub to small tree
Part Used: Leaves, fruit
Folk Use: Leaves are cooked as food. Fruit is edible.

Botanical Name: *Rheum webbianum* Royle
Family: Polygonaceae
Local Name: Chotyal
Habit: Herb
Part Used: Root
Folk Use: Used as laxative.

Botanical Name: *Ribes alpestre* Wall. ex Decne.
Family: Grossulariaceae
Local Name: Kim Hargul
Habit: Shrub
Part Used: Fruit
Folk Use: Food

Botanical Name: *Ribes orientale* Desf.
Family: Grossulariaceae
Local Name: Lhil Hargul
Habit: Shrub
Part Used: Fruit
Folk Use: Food

Botanical Name: *Ricinus communis* L.
Family: Euphorbiaceae
Local Name: Jamal ghota
Habit: A perennial herbaceous shrub
Part Used: Leaves
Folk Use: The whole plant is poisonous and used as purgative in cattle. Poultice of leaves is applied to swellings.

Botanical Name: *Rosa brunonii* Lindl.
Family: Rosaceae
Local Name: Train
Habit: Climbing shrub
Part Used: Flowers, branches
Folk Use: Used in fencing and hedges. Small pieces of branches are used to check the butter produced, while blowing the milk.

Botanical Name: *Rosa webbiana* Wall. ex Royle
Family: Rosaceae
Local Name: Shegay
Habit: Climbing to prostrate shrub.
Part Used: Flowers.
Folk Use: Used in medicine*.

Botanical Name: *Rubus ellipticus* Smith
Family: Rosaceae
Local Name: Sra Karwara, Bagana
Habit: A climbing shrub
Part Used: Fruits and leaves
Folk Use: Leaves serve as fodder for goats, hedge plant.

Botanical Name: *Rubus niveus* Hk.f.
Family: Rosaceae
Local Name: Zekeeny
Habit: A prostate to climbing shrub
Part Used: Fruits and leaves
Folk Use: Leaves are used to cure cough and fever. Fruits are edible.

Botanical Name: *Rumex nepalensis* Spreng
Family: Polygonaceae
Local Name: Hobobal
Habit: Herb
Part Used: Leaves
Folk Use: Used as laxative.

Botanical Name: *Salix tetrasperma* Roxb.
Family: Salicaceae
Local Name: Beown
Habit: A deciduous tree along water courses
Part Used: Whole tree
Folk Use: Fuel wood, used in making smoking pipes, newly sprouted leaves are used to treat fever.

Botanical Name: *Sambucus wightiana* Wall. ex. Wight & Arn.
Family: Sambucaceae
Local Name: Ghandalee
Habit: Shrub
Part Used: Fruit
Folk Use: Used as laxative

Botanical Name: *Saussurea costus* (Falc.) Lipsch.
Family: Asteraceae
Local Name: Minyal, Kuth
Habit: Herb
Part Used: Root
Folk Use: Used to treat pains especially arthritis.

Botanical Name: *Sedum ewersii* Ledeb**.**
Family: Crassulaceae
Local Name: Pichil
Habit: Herb
Part Used: Flowers
Folk Use: Used to treat goats, in case of illness due to overtake of salt.

Botanical Name: *Senecio chrysanthemoides* DC.
Family: Asteraceae
Local Name: Gup/Kalay di Jar
Habit: Herb
Part Used: Whole plant
Folk Use: Used as fodder and also to clean the utensils.

Botanical Name: *Skimmia anquetilia* N.P. Taylor & Airy shaw.
Family: Rutaceae
Local Name: Namer
Habit: Shrub
Part Used: Leaves
Folk Use: It is believed that smoke from leaves repel evil spirits. Also used in curing small pox

Botanical Name: *Solanum nigrum* L.
Family: Solanaceae
Local Name: Kach Mako
Habit: Herb
Part Used: Fruit
Folk Use: Fruit is edible. Medicinal

Botanical Name: *Solanum surattense* Brum. f
Family: Solanaceae

Local Name: Kor
Habit: Herb
Part Used: Fruit, roots
Folk Use: Medicinal

Botanical Name: *Sorbaria tomentosa* (Lindl.) Rehder
Family: Rosaceae
Local Name: Karhee
Habit: Shrub
Part Used: Leaves
Folk Use: Utilized as fodder.

Botanical Name: *Sorbus lanata* (D. Don) S. Schauer
Family: Rosaceae
Local Name: Gurtu
Habit: Small tree
Part Used: Fruit
Folk Use: Fruit is edible.

Botanical Name: *Taraxacum officinale* Weber.
Family: Asteraceae
Local Name: Kaymat gul*/Pakoir
Habit:
Part Used: Whole plant
Folk Use: Root is said to have medicinal properties*. The herb is cooked as food.

Botanical Name: *Taxus wallichiana* Zucc
Family: Taxaceae
Local Name: Chodan
Habit: Tree
Part Used: Bark, fruit
Folk Use: Bark is locally used to make tea. Fruit is edible.

Botanical Name: *Thalictrum cultratum* Wall
Family: Ranunculaceae
Local Name: Mamera
Habit: Herb
Part Used: Leaves
Folk Use: Medicinal

Botanical Name: *Thymus linearis* Benth
Family: Lamiaceae
Local Name: Ispirki
Habit: Herb
Part Used: Herb
Folk Use: Used to make tea

Botanical Name: *Trillidium govanianum* (Royle) Kunth
Family: Trillidiaceae
Local Name: Trepath
Habit: Herb

Part Used: Leaves
Folk Use: Cooked as food

Botanical Name: *Urtica dioica* L.
Family: Urticaceae
Local Name: Joim
Habit: Herb
Part Used: Young leaves. root
Folk Use: Young leaves are cooked as food also dried for later use. Roots are reported to have medicinal properties*.

Botanical Name: *Valeriana jatamansi* Jones
Family: Velerianaceae
Local Name: Mushkbala
Habit: Herb
Part Used: Root
Folk Use: Medicine, commercially exploited.

Botanical Name: *Valeriana stracheyi* Clarke
Family: Valerianaceae
Local Name: Mushkbalee, Koindaru*
Habit: Herb
Part Used: Root
Folk Use: Medicine

Botanical Name: *Verbascum thapsus* L.
Family: Scrophulariaceae
Local Name: Khar dag
Habit: Herb
Part Used: Roots
Folk Use: Medicinal

Botanical Name: *Viburnum cotinifolium* D. Don
Family: Caprifoliaceae
Local Name: Aoon
Habit: Shrub
Part Used: Fruits, branches
Local Uses: Fruits are edible, branches serve as fuel wood.

Botanical Name: *Viburnum nervosum* D. Don.
Family: Caprifoliaceae
Local Name: Juglote/ Jhul
Habit: Shrub
Part Used: Fruits, branches
Local Uses: The fruits are edible, branches serve as fuelwood.

Botanical Name: *Viola sp.*
Family: Violaceae
Local Name: Lilyo
Habit: Herb
Part Used: Whole plant
Folk Use: Leaves are cooked as food. Flowers collected at commercial scale.

Decoction of flowers is useful in coughs and colds. Roots are thought useful in jaundice.

Botanical Name: *Vitis jacquemontii* Parker
Family: Vitaceae
Local Name: Magrath
Habit: A perennial wild climber, sometimes covering rocks or a tree
Part Used: Fruit
Local Uses: Fruit edible.

Botanical Name: *Wikstroemia canescens* Meissn.
Family: Thymeliaceae
Local Name: Kathan
Habit: Shrub
Part Used: Branches
Folk Use: Used are used to make ropes (‘greel’).

Botanical Name: *Xanthium strumarium* L.
Family: Asteraceae
Local Name: Markandi
Habit: Shrub
Part Used: Leaves
Folk Use: Leaves decoction is recommended in malarial fever.

Botanical Name: *Zanthoxylum armatum* DC.
Family: Rutaceae
Local Name: Timbar
Habit: A medium sized spiny shrub
Part Used: Bark, fruit, stem, seeds
Folk Use: Fruit used in case of stomachache, toothache and as a carminative, used in. Seeds are used as condiment, flavoring agent. Young shoots are useful in gum diseases, also used as toothbrushes (‘Miswak’). Stem and branches are used to make walking sticks.

Botanical Name: *Ziziphus jujuba* Mill.
Family: Rhamnaceae
Local Name: Sezen
Habit: Tree
Part Used: Wood, leaves, roots, bark, fruits
Folk Use: Used as fuel wood and fodder for goats. Fruit decoction. Root bark macerated in milk is given along with honey in diarrhea and dysentery.

Botanical Name: *Ziziphus oxyphylla* Edgew.
Family: Rhamnaceae
Local Name: Sezen
Habit: Shurb
Part Used: Fruits, Root
Folk Use: Fruits are edible. Roots are used in curing jaundice.

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